



Indiana Department of Environmental Management
Office of Air Management

Rule Fact Sheet

April 23, 1999

**Development of amendments to Ambient Air Quality Standards for ozone and PM_{2.5}, new definition of PM_{2.5}, amendments to the definition of Particulate Matter, new definition of Total Suspended Particulates, amendments to rules concerning references to the Code of Federal Regulations (CFR), new definition of Compilation of Air Pollutant Emission Factors AP-42, new section concerning references to Compilation of Air Pollutant Emission Factors AP-42
LSA Document #98-236**

Overview

This rulemaking accomplishes the following:

- (1) Incorporates the new federal standards for ozone.
- (2) Incorporates the new federal standards for PM_{2.5}.
- (3) Adds a definition of PM_{2.5}.
- (4) Amends the definition of particulate matter.
- (5) Adds a definition of PM₁₀.
- (6) Adds a definition of total suspended particulates.
- (7) Updates references to the Code of Federal Regulations (CFR) to mean the 1997 edition of the CFR.
- (8) Adds a definition of Compilation of Air Pollutant Emission Factors AP-42.
- (9) Adds the references to the Fifth Edition, Volumes I, of the Compilation of Air Pollutant Emission Factors AP-42 including supplements.

Citations Affected

Amends 326 IAC 1-1-3
Adds 326 IAC 1-1-3.5
Adds 326 IAC 1-2-20.5
Amends 326 IAC 1-2-52
Adds 326 IAC 1-2-52.2
Adds 326 IAC 1-2-52.4
Adds 326 IAC 1-2-82.5
Amends 326 IAC 1-3-4

Affected Persons

The rulemaking incorporating the new federal standards for particulate matter and ozone will positively affect the health of the citizens of Indiana, as the state moves towards compliance with these standards. The other sections of the rulemaking update references to the CFR and clarify for sources

the rules and guidance they should follow for determining the amount of different types of pollutants emitted by different activities.

Potential Cost

The economic impacts of this rule are negligible because the standards being incorporated into state rules are already required by federal law. The costs associated with meeting the new air quality standards will be shared by many industries and the public. But the costs associated with the adverse impact of smog and dust pollution will decrease as air quality improves.

Description

Updating references to the Code of Federal Regulations (CFR)

Many of Indiana's air quality standards, sampling procedures, monitoring requirements and various compliance methodologies are based on federal requirements. During the development of rules under Title 326 of the Indiana Administrative Code, it is often more efficient to refer to or incorporate specific portions of the Code of Federal Regulations rather than reprinting them in full. Incorporation ensures that state rules will not be interpreted in such a way as to conflict with federal law and national policy and allows the state to use the resources of the federal system instead of expending its own rulemaking resources in what would otherwise be an unnecessary duplication of rulemaking effort. By annually updating references to the latest complete published version of the Code of Federal Regulations, the Indiana Department of Environmental Management is able to update, in an orderly manner, all references to

pertinent federal rules, with the exception of those most recently published in the Federal Register.

Title 40 of the Code of Federal Regulations (CFR) entitled "Protection of Environment," includes all federal environmental regulations promulgated by the U.S. Environmental Protection Agency (U.S. EPA). It is referenced throughout Title 326 of the Indiana Administrative Code (IAC).

Title 29 of the CFR, entitled "Intergovernmental Review of Environmental Protection Agency Programs and Activities," contains federal rules for the asbestos and lead programs. Title 29 of the CFR is referenced in Article 14 (Emission Standards for Hazardous Air Pollutants), Article 18 (Asbestos Management at Schools), and Article 23 (Lead-based Paint Program) of Title 326 of the Indiana Administrative Code. Many of these regulations are either directly incorporated by reference into Title 326 of the Indiana Administrative Code as state-enforceable rule provisions, or they are incorporated into Title 326 of the Indiana Administrative Code as federal authority for the implementation and enforcement of state rule provisions.

The 1997 edition of the CFR is a codification of the general and permanent rules published in the Federal Register (FR) as of June 30, 1997.

326 IAC 1-1-3, References to the Code of Federal Regulations, references the yearly edition of the Code of Federal Regulations which is applicable to incorporation by reference throughout Title 326, unless a different edition is specifically incorporated into an individual rule.

Examples of changes that occurred in the CFR between July 1, 1996, and June 30, 1997 pertinent to the Office of Air Management

40 CFR 51, "Preparation, Adoption, and Submittal of State Implementation Plans"

- This final rule adds seven methods to Appendix M for capture efficiency testing to assist states in adopting enforceable capture efficiency measurement protocols in their state implementation plan for ozone. It will also help to improve states' ability to enforce regulations to reduce volatile organic compounds.

40 CFR 61, "National Emission Standards for Hazardous Air Pollutants"

- National emissions standards for radionuclide emissions from facilities licensed by Nuclear Regulatory Commission and federal facilities not covered by Subpart H. U.S. EPA rescinded Part 61, subpart I. This rule became effective on December 30, 1996.

40 CFR 63, "National Emission Standards for Hazardous Air Pollutants for Source Categories"

- National emission standards for hazardous air pollutants for Group I polymers and resins affecting existing and new plants that emit organic hazardous air pollutants indicated on U.S. EPA's list of 189 hazardous air pollutants. This rule became effective on September 5, 1996.
- Correction to final rules concerning national emission standards for hazardous air pollutants for aerospace manufacturing and rework facilities and shipbuilding and ship repair (surface coating) operations. Contains information announcing information collection requirements. This rule became effective on December 17, 1996.
- Rule clarification on organic hazardous air pollutants for synthetic organic chemical manufacturing industry and other processes subject to the negotiated requirements for equipment leaks. This rule became effective on January 17, 1997.
- Test methods for polymers and resins I rule, Appendix A - Test Methods 310 A, B, C; 312 A,B,C; 313 A,B for detection of residual amounts of hazardous air pollutants in conjunction with recently issued national emission standards for Polymers and Resins I. This rule became effective on March 17, 1997.
- Final standards for hazardous air pollutant emissions from wood furniture manufacturing operations. A correction was published to clarify errors in the regulatory text. This rule became effective on June 3, 1997.
- National emission standards for hazardous air pollutants for group IV polymers and resins

affecting existing and new plants that emit organic hazardous air pollutants indicated on U.S. EPA's list of 189 hazardous air pollutants. This rule became effective on September 12, 1996.

- National emission standards for hazardous air pollutants for perchloroethylene dry cleaning facilities to implement a settlement agreement that U.S. EPA entered into regarding a small number of transfer machines. This rule became effective on September 19, 1996.

40 CFR 75, "Continuous Emission Monitoring"

- Under the acid rain program, U.S. EPA made technical revisions to the continuous emissions monitoring regulations in response to public comments by streamlining the rule and increasing implementation flexibility. This rule became effective on December 20, 1996.

40 CFR 76, "Acid Rain Nitrogen Oxides Emission Reduction Program"

- Standards for the second phase of the nitrogen oxides reduction program under the acid rain program under Title IV of the Clean Air Act that establish nitrogen oxides emission limits for certain coal fired electric utility units and revise the nitrogen oxides emission limits for other units. This rule became effective on December 19, 1996.

40 CFR 82, "Protection of Stratospheric Ozone"

- Notice that expands the list of acceptable substitutes for ozone depleting substances under U.S. EPA's significant new alternative policy (SNAP). This rule became effective on March 10, 1997.
- On the listing of substitutes for ozone depleting substances, this action imposes restrictions or prohibitions on substances for ozone depleting substances under U.S. EPA's significant new alternatives policy (SNAP). This rule became effective on November 15, 1996.

40 CFR 86, "Control of Air Pollution from New and In-use Motor Vehicles and New and In-use Motor Vehicle Engines: Certification and Test Procedures"

- Revisions to motor vehicle inspection and maintenance program requirements for vehicles equipped with on-board diagnostic systems as part of the inspection requirements in basic and enhanced inspection and maintenance programs. This rule became effective on October 7, 1996.

References to the Compilation of Air Pollution Emission Factors AP-42 including Supplements and Definition of Compilation of Air Pollution Emission Factors (AP-42)

Compilation of Air Pollutant Emission Factors (AP-42) is a document issued by U.S. EPA. It is a fundamental tool for air quality management and is used for developing emission control strategies, determining applicability of permitting and control programs, ascertaining the effects of sources and appropriate mitigation strategies, and a number of related applications. The Fifth Edition of AP-42, Volume I, contains information on over 200 stationary source categories. This information includes brief descriptions of processes used, potential sources of air emissions from the processes and common methods used to control these air emissions. Methodologies for estimating the quantity of air pollutant emissions are presented in the form of Emission Factors. An emission factor is a representative value that relates the quantity of a pollutant released to the atmosphere with an activity associated with the release of that pollutant. Such factors facilitate estimation of emissions from various sources of air pollution.

326 IAC 1-1-3.5 , References to the Compilation of Air Pollution Emission Factors AP-42 including supplements, references the January 1995, Fifth Edition, Volume I, including supplements A through D. The current rules contain references to AP-42. The AP-42 is the default and presumption for calculating emissions. However, language exists in the rules to allow argument that another emission factor is more accurate. By adding the AP-42 reference to the rules, the department will be able to update it annually to be assured that the most current emission factors are referenced throughout the rules.

Definition of PM_{2.5} and Incorporation of the new federal standards for PM_{2.5} and Ozone

Section 110 of the Clean Air Act Amendments of 1990 requires each state to adopt the primary and secondary national ambient air quality standard (or

revision) within three years after promulgation (or shorter period as the Administrator may prescribe).

On July 18, 1997, U.S. EPA announced revisions to the national ambient air quality standards (NAAQS) for particulate matter (PM). U.S. EPA added PM_{2.5} as a new standard for particulate matter and revised the form of the current 24-hour PM₁₀ standard. PM_{2.5} is particulate matter with an aerodynamic diameter less than or equal to two and five-tenths (2.5) micrometers. The new PM standard focuses on microscopic soot and dust particles which can cause more health problems as smaller particles penetrate deeper into the lungs. The new primary standard will provide increased protection against a wide range of PM-related health effects, including premature mortality and increased hospital admissions and emergency room visits, primarily in the elderly, children, and individuals with asthma. The new secondary standard will provide appropriate protection against PM-related public welfare effects including soiling, material damage, and visibility impairment.

Indiana's air rules must be updated to reflect the new standards for particulate matter. This includes amending the definition of "particulate matter" to include PM_{2.5}.

On July 18, 1997, U.S. EPA also announced revisions to the national ambient air quality standards for ozone based on its review of the available scientific evidence linking exposures to ambient ozone to adverse health and welfare effects at levels allowed by the current ozone standards. The current one (1) hour primary standard of (0.12) parts per million, is replaced by an eight (8) hour standard at a level of eight-hundredths (0.08) parts per million, with a form based on a three (3) year average of the annual fourth-highest daily maximum eight-hour average ozone concentration measured at each monitor within an area. The new primary standard with a longer averaging time will protect against longer exposures, and provide increased protection to the public, especially children and other at-risk populations, against a wide range of ozone-induced health effects, including decreased lung function, increased respiratory symptoms, hospital admissions and emergency room visits. The current one-hour secondary standard is replaced by an eight-hour standard which will provide increased protection to

the public welfare against ozone-induced effects on vegetation.

As with particulate matter, Indiana's rules must be amended to reflect the current federal ozone standard.

Consideration of Factors Outlined in Indiana Code 13-14-8-4

Indiana Code 13-14-8-4 requires that in adopting rules and establishing standards, the board shall take into account the following:

- 1) All existing physical conditions and the character of the area affected.
- 2) Past, present, and probable future uses of the area, including the character of the uses of surrounding areas.
- 3) Zoning classifications.
- 4) The nature of the existing air quality or existing water quality, as appropriate.
- 5) Technical feasibility, including the quality conditions that could be reasonably be achieved through coordinated control of all factors affecting the quality.
- 6) Economic reasonableness of measuring or reducing any particular type of pollution.
- 7) The right of all persons to an environment sufficiently uncontaminated as not to be injurious to:
 - (A) human, plant animal, or aquatic life; or
 - (B) the reasonable enjoyment of life and property.

Consistency with Federal Requirements

The new and amended rules are consistent with federal rules and guidance.

IDEM Contact

Additional information regarding this rulemaking action can be obtained from Kiran Verma, Rule Development Section, Office of Air Management, (317) 233-5678 or (800) 451-6027, ext. 3-5678 (in Indiana).